

REMARKS

Claims 1-31 are pending in the present patent application. Claims 1, 2, 7-12, 17-23, and 28-31 stand rejected; and claims 3-6, 13-16, and 24-27 stand objected to. By this amendment, claims 3, 13, and 24 have been amended. This application continues to include claims 1-31.

The Examiner has objected to claims 3-6, 13-16, and 24-27 as being dependent upon a rejected base claim, but has indicated that claims 3-6, 13-16, and 24-27 contain allowable subject matter, and would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for the indication of allowability regarding claims 3-6, 13-16, and 24-27. Applicants have so amended claims 3, 13, and 24, and thus believe claims 3-6, 13-16, and 24-27 to be in condition for allowance. Accordingly, Applicants respectfully request that the objection to claims 3-6, 13-16, and 24-27 be withdrawn.

Claims 1, 11, and 22 were rejected under 35 U.S.C. §102(e) as being anticipated by Johnson, et al., U.S. Patent 6,402,290. Applicants respectfully request reconsideration of the rejection of claims 1, 11, and 22 in view of the following.

Johnson, et al., is directed to a replaceable inkjet printhead cleaner service station system including a capping system that compensates for spacing variations between the cap and the printhead (col. 1, lines 9-15). Johnson, et al., discloses a service station 70, including a translationally moveable pallet 72 that is selectively driven in a forward direction 76 and in a rearward direction 78 (col. 7, lines 33-36). Four replaceable inkjet printhead cleaner units 80, 82, 84, 86 are installed into pallet 72 (col. 7, lines 38-45). The printhead cleaner units are described with reference to a generic cleaner unit 100, that includes a base 102 (Fig. 3; col. 7,

line 61). Base 102 defines a spittoon chamber 108 and includes four cam surfaces or cap ramps 110, which are used during the printhead capping and uncapping process (col. 8, lines 2-5). For color inks, spittoon chamber 108 is filled with an ink absorber 124, but is supplied as an empty chamber if used with black ink (col. 8, lines 17-26).

A cap sled 150 has four cam followers 152 that ride along the cap ramps or cams 110 of base 102, and has an activation wall 151 with a rear surface that engages the printhead (col. 9, lines 14-19). Movement of pallet 72 in direction 78 elevates the cap sled 150 towards the printhead into the capping position (col. 15, lines 54-57). Movement of pallet 72 in direction 76 lowers cap sled 150, thus uncapping the printheads (col. 16, lines 53-57).

Applicants believe that claims 1, 11, and 22 patentably define Applicants' invention over Johnson, et al., for at least the reasons set forth below.

Applicants' hereby incorporate by reference their previous arguments with respect to claims 1, 11, and 22.

Claim 1 is directed to a maintenance station for a printer. Claim 1 recites, among other things, a fixed support housing, and a sled supported on said support housing and being movable relative to said support housing in both a horizontal direction and a vertical direction. Johnson, et al., does not disclose, teach, or suggest the aforementioned subject matter of claim 1. However, the Examiner asserts otherwise, relying on Johnson, et al. Fig. 2, element 72, and column 4, lines 1-33.

In contrast to a fixed support housing, and a sled supported on the [fixed] support housing and being movable relative to the [fixed] support housing in both a horizontal direction and a vertical direction, Johnson, et al., discloses a translationally moveable pallet 72, that is selectively driven *in a forward direction 76 and in a rearward direction 78* (col. 7,

lines 33-36). Thus, Johnson, et al. discloses that the asserted sled, moveable pallet 72, may be driven in forward and rearward directions, but does not disclose, teach, or suggest that moveable pallet 72 moves in a vertical direction. Accordingly, the Johnson, et al. moveable pallet 72 does not disclose, teach, or suggest a sled supported on a [fixed] support housing and being movable relative to the [fixed] support housing in both a horizontal direction *and a vertical direction*, as recited in claim 1.

Column 4, lines 1-33, also relied upon by the Examiner, is part of the summary of the Johnson, et al. invention, and makes reference to a capping system having a base defining a cam surface, and a sled supporting a cap lip for sealing a printhead. The sled has a cam follower that engages the cam surface to move between a rest position and a sealing position. Linear motion of the base is used to move the cap sled from the rest position to the sealing position.

It is clear that the sled referred to at column 4, lines 1-33 is the cap sled 150 having four cam followers 152 which ride along the cap ramps or cams 110 of base 102 (col. 9, lines 14-19). Movement of pallet 72 in direction 78 elevates the cap sled 150 towards the printhead into the capping position (col. 15, lines 54-57), whereas movement in direction 76 lowers cap sled 150, thus uncapping the printheads (col. 16, lines 53-57).

Applicants respectfully submit that a base of a capping system that moves linearly so as to drive a cap sled from a rest position to a capping position and back does not disclose, teach, or suggest a *fixed support housing, and a sled supported on the [fixed] support housing* and being movable relative to the [fixed] support housing in both a horizontal direction and a vertical direction, but rather, discloses a moveable support for the cap sled.

Accordingly, neither the Johnson, et al. moveable pallet 72 nor the cap sled 150 anticipate a sled supported on a [fixed] support housing and being movable relative to the [fixed] support housing in both a horizontal direction and a vertical direction, as recited in claim 1.

Claim 1 also recites a spit containment device configured to receive spit ink, the spit containment device having a fixed vertical position and being horizontally movable in response to movement of the sled. The Johnson, et al. cap sled 150 clearly does not have a fixed vertical position, but rather, is elevated and lowered in performing its capping function. In addition, as set forth above, moveable pallet 72 does not disclose, teach, or suggest the sled recited claim 1, since moveable pallet 72 is not movable relative to a fixed support housing in both a horizontal direction and a vertical direction, as recited in claim 1. Hence, Johnson, et al., does not disclose, teach, or suggest a spit containment device configured to receive spit ink, the spit containment device having a fixed vertical position and being horizontally movable in response to movement of the sled.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that -Johnson, et al. does not disclose, teach, or suggest the subject matter of claim 1. Claim 1 is thus believed allowable in its present form.

Claim 11 is directed to an ink jet printer. Claim 11 recites, among other things, a fixed support housing, a sled supported on said support housing and being movable relative to said support housing in both a horizontal direction and a vertical direction, and a spit containment device configured to receive ink spit from said printhead, said spit containment device having a fixed vertical position relative to said printhead and being horizontally movable in response

to movement of said sled. Claim 11 is believed allowable for substantially the same reasons as set forth above with respect to claim 1.

Claim 22 is directed to a maintenance station for a printer. Claim 22 recites, among other things, a fixed support housing; and a sled supported on said support housing and being movable relative to said support housing in both a horizontal direction and a vertical direction.

Johnson, et al. does not disclose, teach, or suggest a fixed support housing, and a sled supported on the [fixed] support housing and being movable relative to the [fixed] support housing in both a horizontal direction and a vertical direction, for substantially the same reasons as set forth above with respect to claim 1.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that Johnson, et al. does not disclose, teach, or suggest the subject matter of claims 1, 11, and 22, and thus respectfully request that the rejection of claims 1, 11, and 22 under 35 U.S.C. §102(e) be withdrawn.

Claims 2, 7-10, 12, 17-20, 23, and 28-31 were rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson, et al., in view of Lou, et al., U.S. Patent 5,997,128. Applicants respectfully request reconsideration of the rejection of claims 2, 7-10, 12, 17-20, 23, and 28-31 in view of the following.

Lou, et al., is directed to a translational printhead servicing station and method for maintaining inkjet printhead health (col. 1, lines 6-8). Lou, et al., discloses, as prior art, spittoon designs including tall narrow designs having a chimney through which ink is spit (col. 2, lines 8-9). The Lou, et al., apparatus includes a translational service station 45, having a frame 46 including a stationary base 60, and two shuttles, a cap shuttle 62 and a primer shuttle 64, joined together to define a collapsible spittoon 65 (col. 6, lines 56-61), that is

collapsible in the horizontal direction (Fig. 2 - rear wall 70 is collapsible against front wall 66 against the bias of coil spring 73). Lou, et al, also discloses an auxiliary spittoon chimney 200 defined by a U-shaped channel wall 202, extending upwardly from the service station base 60, and the surface the inboard sidewall 67 which faces toward the printzone 25 (col. 12, lines 47-50).

Applicants believe that claims 2, 7-10, 12, 17-20, 23, and 28-31 patentably define Applicants' invention over the cited references, Johnson, et al. in view of Lou, et al., for at least the reasons set forth below.

Claims 2, 7-10, 12, 17-20, 23, and 28-31 are believed allowable due to their dependence, directly or indirectly, on their otherwise allowable respective base claims 1, 11, and 22. For example, as set forth above, Johnson, et al. does not disclose, teach, or suggest the subject matter of claims 1, 11, and 22. Applicants respectfully submit that Lou, et al. does not overcome the deficiency of Johnson, et al., as applied to claims 1, 11, and 12; nor does the Examiner assert as much. Rather, the Examiner relies upon Lou, et al., solely for the proposition that "the spit containment device comprises a chimney."

In contrast to a sled supported on a fixed support housing and being movable relative to the fixed support housing in both a horizontal direction and a vertical direction, as recited in each of claims 1, 11, and 22, Lou, et al. discloses a translational service station 45, having a frame 46 including a stationary base 60, and two sliding shuttles, cap shuttle 62 and primer shuttle 64, joined together to define a horizontally collapsible spittoon 65 (col. 6, lines 56-61, Fig. 2). Shuttles 64 are linearly driven forward and backward along the length of the service station base (col. 7, lines 9-14), not in a vertical direction. Accordingly shuttles 62 and 64,

defining collapsible spittoon 65, are not moveable relative to the fixed support housing in both a horizontal and a vertical direction, as recited in claims 1, 11, and 22.

Accordingly, the asserted combination of Johnson, et al, in view of Lou, et al. does not disclose, teach, or suggest the subject matter of claims 1, 11, and 22. Claims 2, 7-10, 12, 17-20, 23, and 28-31 are thus believed allowable due to their dependence, directly or indirectly, on their otherwise allowable respective base claims 1, 11, and 22.

In addition, claims 2, 7-10, 12, 17-20, 23, and 28-31 further and patentably define the invention over Johnson, et al, in view of Lou, et al:

For example, claim 8 is directed to the maintenance station of claim 7, “wherein said opening includes at least one substantially vertical slot, said chimney having at least one substantially vertical rib, each said rib being received in a corresponding said vertical slot.” Claim 18 depends from claim 17, and recites the same language as in claim 8. Claim 29 depends from claim 28, and recites the same language as claim 8.

Rather than an opening that includes at least one substantially vertical slot, the chimney having at least one substantially vertical rib, each said rib being received in a corresponding said vertical slot, as recited in claims 8, 18 and 29, Johnson, et al., discloses a cap sled 150 which has four cam followers 152 which ride along the cap ramps or cams 110, 182 (see Fig. 8; col. 9, lines 14-19; col. 15, lines 54-57). Appellants respectfully submit that a cap sled having cam followers received on cam surfaces does not disclose, teach, or suggest structure wherein the opening in the sled that receives the chimney includes at least one substantially vertical slot, the chimney having at least one substantially vertical rib, each said rib being received in a corresponding said vertical slot.

In addition, Appellants respectfully submit that Lou, et al., does not disclose, teach, or suggest such structure, wherein the opening in the sled that receives the chimney includes at least one substantially vertical slot, the chimney having at least one substantially vertical rib, each said rib being received in a corresponding said vertical slot. Rather, Lou, et al., discloses a collapsible spittoon 65 (col. 6, lines 60-61), and “an auxiliary spittoon chimney 200 defined by a U-shaped channel wall 202, extending upwardly from the service station base 60, and the surface the inboard sidewall 67 which faces toward the printzone 25.” (Lou, et al. col. 12, lines 47-50).

Accordingly, claims 8, 18 and 29 are believed allowable in their own right.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that Johnson, et al. in view of Lou, et al. does not disclose, teach, or suggest the subject matter of claims 2, 7-10, 12, 17-20, 23, and 28-31. Applicants therefore respectfully request that the rejection of claims 2, 7-10, 12, 17-20, 23, and 28-31 under 35 U.S.C. 103(a) be withdrawn.

Claim 21 was rejected under 35 U.S.C. §103(a) as being unpatentable over Johnson, et al., in view of Lou, et al., and in further view of Vega, et al., U.S. Patent Application Publication 2002/0158941 A1. Applicants respectfully request reconsideration of the rejection of claim 21 in view of the following.

Vega, et al., is directed to a print nozzle servicing mechanism (page 1, paragraph 1). Vega, et al., discloses a service station 70 having an integral spittoon 72 (page 3, paragraph 42). A shuttle 74 is located in spittoon 72, and is arranged to move in a reciprocal manner between the front wall 72d and rear wall 72b of spittoon 72 (page 3, paragraph 45). A spitting frame 80 having a surface 82 is mounted on shuttle 74 (page 4, paragraph 49). Ink drops ejected from the printheads impact against the horizontal, planar surface 82 of the spitting

frame 80 (page 4, paragraph 55). The spitting distance may be approximately 1 mm if the surface of the spitting frame is made of a soft material, such as foam (page 4, paragraph 56).

Applicants believe that claim 21 patentably defines the Applicants' invention over the cited references, Johnson, et al. in view of Lou, et al., and in further view of Vega, et al., for the reasons set forth below.

Claim 21 is believed allowable due to its dependence on otherwise allowable base claim 11. For example, as set forth above, Johnson, et al. in view of Lou, et al. does not disclose, teach, or suggest the subject matter of claim 11. Applicants respectfully submit that Vega, et al. does not overcome the deficiency of Johnson, et al. in view of Lou, et al., as applied to claim 11; nor does the Examiner assert as much. Rather, the Examiner relies upon Vega, et al., solely for the proposition of "reducing spitting distance to 1.0 mm."

In contrast to a sled supported on a fixed support housing and being movable relative to the fixed support housing in both a horizontal direction and a vertical direction, as recited in claim 11, Vega, et al. discloses a service station 70 having an integral spittoon 72 that has a shuttle 74 located therein, which is arranged to move in a reciprocal manner between the front wall 72d and rear wall 72b of spittoon 72 (page 3, paragraphs 42, 45). It is clear from Figs. 1 and 2 that shuttle 74 moves from side to side, and not in a vertical direction, as recited in claim 11.

Accordingly, the asserted combination of Johnson, et al. in view of Lou, et al., and in further view of Vega, et al. does not disclose, teach, or suggest the subject matter of claim 11. Claim 21 is thus believed allowable due to its dependence on otherwise allowable base claim 11.

In addition, claim 21 further and patentably defines the invention over Johnson, et al, in view of Lou, et al., and in further view of Vega, et al.

For example, claim 21 is directed to the printer of claim 12, wherein a gap between said chimney and said printhead is not greater than approximately 1.0 mm when said chimney receives the ink spit from said printhead. In contrast to claim 21, Vega, et al. fails to disclose a chimney, let alone a chimney positioned such that the gap between the chimney and the printhead is not greater than approximately 1.0 mm. Rather, Vega, et al., discloses that ink drops ejected from any nozzle will impact against the horizontal, planar surface 82 of the spitting frame 80. In view of the structural differences between Vega, et al. and Johnson, et al. or Lou, et al. one would not be motivated to combine the teachings of Vega, et al. with Johnson, et al. and Lou, et al. to form a gap between a chimney and a printhead not greater than approximately 1.0 mm.

Accordingly, claim 21 is believed allowable in its own right.

Accordingly, for at least the reasons set forth above, Applicants respectfully submit that Johnson, et al. in view of Lou, et al., and in further view of Vega, et al. does not disclose, teach, or suggest the subject matter of claim 21. Applicants therefore respectfully request that the rejection of claim 21 under 35 U.S.C. 103(a) be withdrawn.

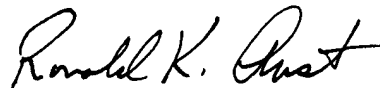
For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the appended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby

conditionally petition therefor and authorize that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (317) 894-0801.

Respectfully submitted,



Ronald K. Aust
Registration No. 36,735

Attorney for Applicants

RKA14/ts

TAYLOR & AUST, P.C.
12029 E. Washington Street
Indianapolis, IN 46229
Telephone: 317-894-0801
Facsimile: 317-894-0803

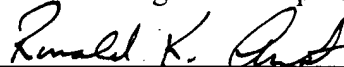
Enc.: Return postcard

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to:
Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,
on: July 23, 2004.

Ronald K. Aust, Reg. No. 36,735

Name of Registered Representative



Signature

July 23, 2004

Date